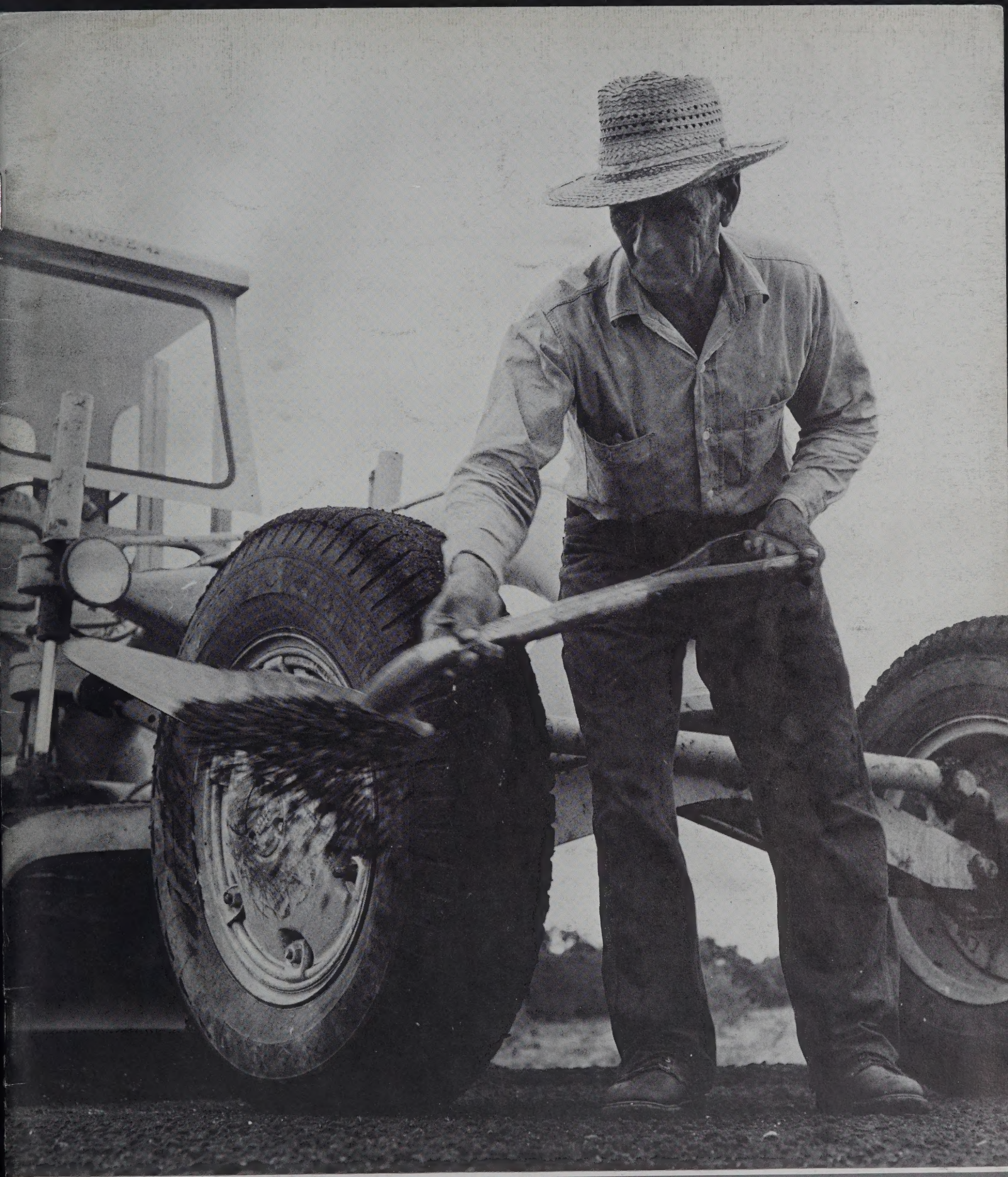

Texas Highways

July 1964

Like a mid-summer night's dream, city night lights twinkling over a string of docked pleasure craft in Corpus Christi Harbor make a lovely summer evening scene for tourists to the coast to remember.

Texas Highways

July 1964

Volume II • Number 7

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About Our Cover

A single moment is captured on film from a long summer day's work on Texas highways. Graciano Cortez, who has been with the Texas Highway Department for 34 years, is helping to apply level-up asphaltic concrete on S.H. 71 east of Austin. Summertime is the busiest time of the year for the Highway Department's maintenance forces.

You Got a Minute?

Summer months for the Texas Highway Department are the really busy months. Many of us start earlier in the morning and work later in the evening. Although maintenance crews have been busy repairing highways during the fall and winter months, they really pour it on now. Construction seems to move faster.

Now time is of the essence. And time is an irreplaceable commodity for anyone who is serious about getting a job done. As state employes, it is our duty to make our minutes count as much as possible.

Just about everybody has his own formula for making the most of his time. By and large, efficiency can be improved by simply applying a little common sense. Here are 10 tips to help you start to save your valuable minutes. Read them. After that, you're on your own. Nobody but you can save your time and make it more productive.

Take advantage of your "best time." A businessman who decided to study the piano insisted on lessons at 7 a. m. rather than an evening hour. In the morning he is fresh and receptive to new ideas; in the evening he is tired and dull.

Organize the flow of your work, especially repetitive tasks. A secretary found she could save time by holding her letters until the end of the day, then by creasing all sheets along the fold line, she could quickly fold letters and stuff them into envelopes, the flaps of which had been previously opened all at one time.

Good communications can save time. If you're the boss, make sure your orders are complete and understandable. When you write a letter, say exactly what you mean to say. When you're listening to instructions, get them right; doing a job wrong costs valuable time.

Make a list. Some people find it helpful to make a list of the jobs they are going to do the next day. This is a handy reminder of what is most important and a check on how well you spend your time.

Stick with what you're doing. If you have a job to do, stick with it until it is completed or until you have taken it as far as possible at the time. Once you're diverted, you have to refocus your attention, and you lose valuable minutes while you do it.

Don't let the telephone run you. Interruptions from the telephone can cost you valuable minutes. When you call someone, know what you want to say and come to the point. When you answer the telephone, if you are businesslike the caller will get the idea. You can be brief without being rude. If you have a job to do that can't be interrupted, ask someone else to answer your phone and take down messages that require an answer.

The way someone else does his job may waste your time. If you review reports from subordinates, you can suggest better organization or that useless information be left out. In field work the way pieces of material are delivered to you can affect your efficiency. If you see a way to do it better, make a suggestion.

Organize your mail. If wading through a daily stack of mail is the dread of your day, then take charge of things. Chances are, if you have that much mail, someone is available to organize it for you. Set aside a time for the mail that requires attention each day. Go through all of it and dictate answers or make notes for when you do reply. Mail that can wait—such as magazines, trade journals, catalogues—can be collected over a week and then read or scanned at one sitting.

Additional equipment may be required. If additional equipment will enable you to do your job better, talk to the boss. He'll be receptive—if you have a case, but equipment is no more efficient than its operator.

Leave time for thinking. Any job, no matter how mechanical or repetitive, still has room for improvement. Find time in your day for thinking about your job, not only in terms of output but also in job satisfaction. After all, you deserve the most you can get out of your minutes. How much you get is pretty well up to you.

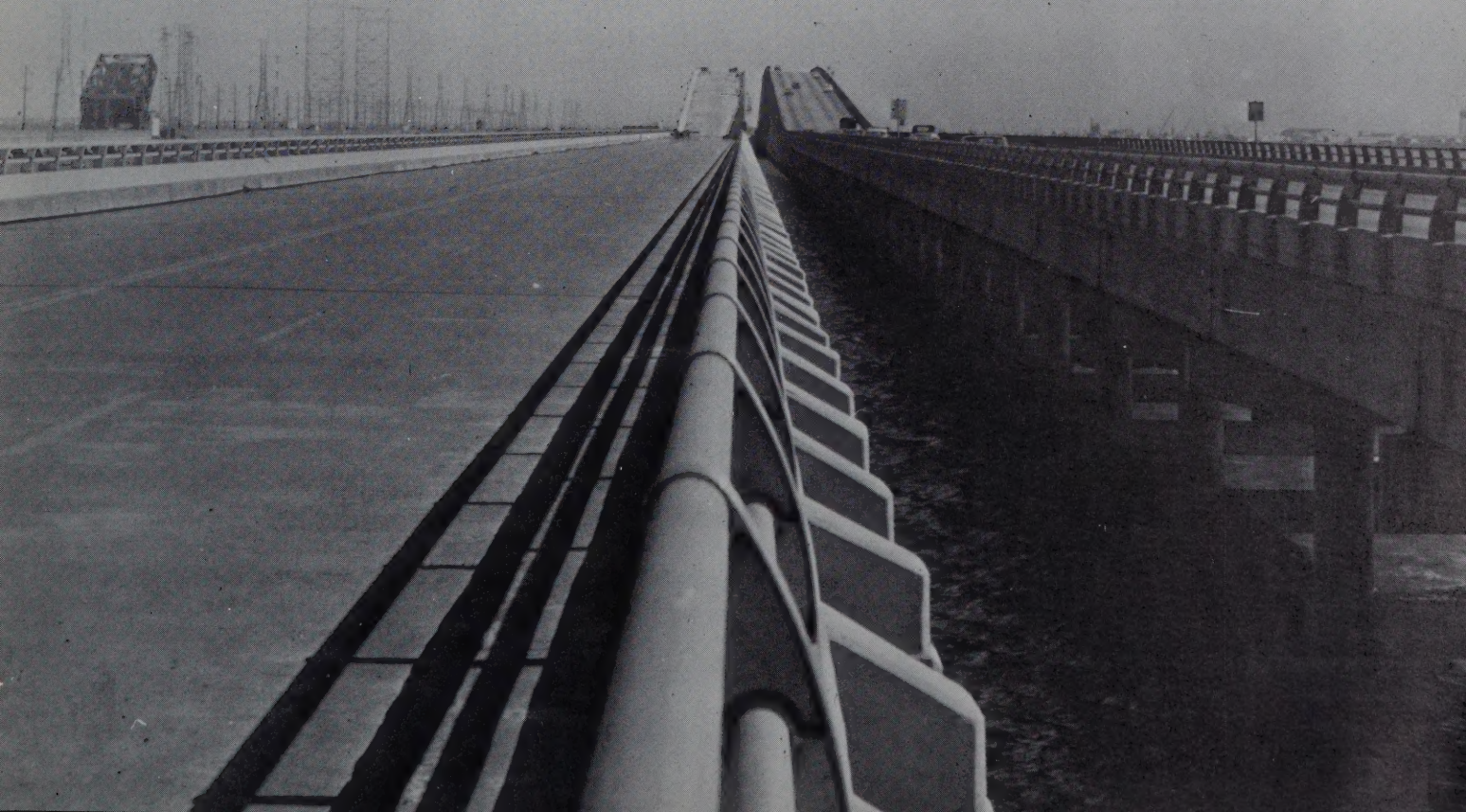
Galveston's Twin Causeways Dedicated

For the first time in Galveston's history, it is connected with the mainland by twin causeways, each one handling one-way traffic.

The old Galveston causeway, completed in 1938, was reopened April 29 after a remodeling job that lasted more than two years and cost $2,014,600. A new causeway that two-way traffic has shared since November, 1961, now handles inbound Galveston traffic.

State Highway Engineer D. C. Greer introduced Texas Highway Commission Chairman Herbert C. Petry Jr., who gave the dedication address. The causeway was christened with Galveston Bay water emptied from bottles by Petry, Nueces County Judge Peter J. LaValle, Galveston Mayor Edward Schreiber, and dedication master of ceremonies Carey Mayfield, president of the Galveston Chamber of Commerce.

This picture shows the twin causeway system. On the horizon the elevated sections of the causeways loom high, permitting canal traffic to pass beneath. Soon to be forgotten are the days when traffic backed up for blocks when the old bascule span was lifted to let a barge or boat pass by. Now boat and motor traffic both flow freely.



D. C. Greer and Herbert Petry are flanked by former Texas Highway Commission chairmen E. H. Thornton Jr., 1951 to 1959, second left, and Marshall Formby, 1957 to 1959, right.

Faces at the Dedication

Colors were presented by an honor guard from the U.S. Marine Reserve unit of Galveston as Texas Highway Commissioner Herbert C. Petry Jr. gave the formal dedication address.

Marshall Formby, chairman of the Texas Highway Commission 1957 to 1959, right, talks with State Highway Engineer D. C. Greer, left, and the present commission chairman, Herbert C. Petry Jr.

This tourist family—the Wilton Stones of Dallas—were selected at random from the crowds at the dedication to snip the fish net barrier to open the newly remodeled Galveston Causeway. The Stones received a dozen gifts from Galveston businessmen.

Photos by F. W. Brown

The old Galveston Causeway built in 1912 still stands near Galveston's new twin causeway system. The railroad, visible at the far left, is still used by one or two trains a day. The piles from the early-day wagon bridge can be seen through the bents of the new causeways.

The History of Galveston's Causeway

Foyest W. Brown, Senior Resident Engineer
Houston, District 12

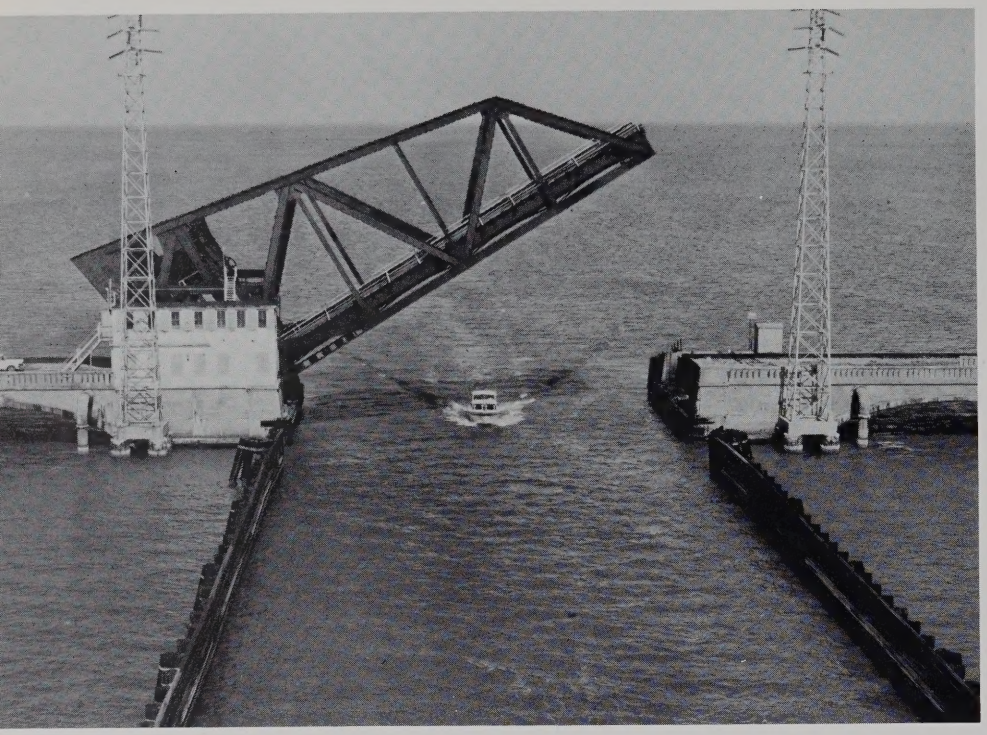
AN OLD-NEW causeway has been opened and properly dedicated. Dignitaries have made their speeches, a strategic ribbon has been cut, a first automobile has made its trip across the causeway and in local papers there have been photographs and stories, and a man living in Galveston and working on the mainland will, in the morning, make the trip to his work a few minutes faster. But in a week or so he will have adjusted his time so that he will leave home a few minutes later after having an extra cup of coffee, and he will think nothing more of the new facility that was designed and constructed with him in mind.

What a hundred years ago would have been known as an engineering miracle has now passed on as a common happening.

It was not always such. Galveston has had many bridges, and in the past it has had real cause for substantial celebrations. The wounded General Sam Houston had to be transported from San Jacinto to Galveston by boat. Colonel M. B. Menard always rode a boat to the city he founded, and even before that, the notorious pirate Jean Lafitte lost four of his vessels to a hurricane, and would have been stranded on the island except for a boat that weathered the storm. The Karankawa Indians paddled their dugouts to the island, from what is now Point Bolivar, to do their hunting.

As the city grew, its future as a seaport became more evident. In May of 1842, the first steam ferryboat began operating between Galveston and the mainland. In 1858 trains operated over the Galveston-Houston & Henderson Railroad from Virginia Point to Houston. After being approved by the electorate, a contract was let for a bridge over Galveston Bay to Virginia Point. This bridge was completed and trains began operating in 1860.

The opening of this bridge was a great event and was celebrated by week-long special church services and great and near great oratory. In addition to the great convenience to the traveler, this bridge had a tremendous impact on the economy of the state, for it opened up the vast Texas cotton lands



Cars were once held up for blocks when the old causeway's lift span accommodated water craft that wanted to pass under the causeway. The elevated arches of the new causeways permit water traffic to pass freely under the causeways without interfering with motor traffic.

to a seaport. This was not to be the case for long, for the Yankees soon came from the North and blockaded the city. By October 1862, it had been occupied by the Federal troops.

As though doomed never to realize its potential, the bridge was damaged by winds and high tides in 1867 and 1875. In 1867, a man, by the name of Tipton Walther, contracted to repair the structure. His payment was to be 25 per cent of the gross earnings of the bridge until January 1, 1875. He did rather well for he received $100,000 a year until 1875 for his work which cost him only $67,000. He paid no income tax.

Then the bridge was completely destroyed in the flood of 1900, but at this time Galveston was well on its way to being the leading seaport of the Atlantic Coast.

The burning issue of the county election of 1890 was whether Galveston needed a wagon bridge to the mainland. The pro-bridge candidate became the County Judge and the impetus was given for the construction of a bridge which would open communication with the small communities on the mainland.

This new steel bridge, with a wooden deck, was built on concrete piers supported by timber piles. It was the longest steel structure in the United States, and it was considered the engineering marvel of its time. It was composed of 90 steel spans, each 80 feet long, and a 226-foot swing span that was constructed in the center of the bridge. When opened, there was a clearance of 100 feet on each side of the turntable. As the bridge deck was only 13 feet above mean low tide, it is easy to conjecture the salt encrusted horses and wagons, not to mention passengers, that came off the bridge on a typical windy, wintery day. The more than two-mile trip by wagon could have been a brutal ride.

When the storm of 1900 came, there were two railroad trestle bridges in addition to the wagon bridge. After the storm, there were none.

When the tide is low, people today can catch glimpses of rows of old piles barely projecting above the water south of the new causeway. This is all that remains of the engineering marvel of its day.

Galveston, as a result of the hurricane, was completely cut off. A railroad trestle bridge was hurriedly constructed. The life blood of railroad cars to the port had to be maintained. Plans were begun immediately for a new wagon bridge, but a new factor in American life had made itself heard. Fortunately, enough people with foresight in Galveston realized that the automobile and trucks would replace the wagon and horse in commerce and that a better type of facility would have to be provided. Accordingly, on September 18, 1909, construction started on a concrete structure composed of a series of arches and a single-lift draw-span in the center. It had a 17 to 18-foot two-lane highway, space for two railroads and an interurban track. The bridge was officially opened by Governor Colquitt in 1912. He was accompanied from Houston to the bridge by an immense caravan of 100 automobiles. The opening of this modern causeway is one of the most important things that happened to Galveston in its entire history.

The causeway was heavily damaged by a hurricane in 1915. The damaged approaches were repaired to the extent that railroad traffic could be resumed. It was 1922 before the automobile could again use the highway facilities. Until 1930, the bridge was the only means by which an automobile could be driven to Galveston except by being carried by railroad cars. That year, a ferry service was inaugurated by the county to operate between the island and Bolivar Peninsula. The Texas Highway Department now maintains this service.

As foresighted as the city fathers had been, they could not have anticipated the tremendous impact that the automobile would have upon their little island. By the early 1930's literally thousands from all over the state were driving to Galveston to the beaches on Sundays and holidays. Tourists from all over the nation came for extended

vacations. It soon became evident the Galveston Causeway could no longer handle the traffic. In 1934 plans were made to widen the existing causeway, but by 1935 it became apparent that to build a new causeway would cost no more than to widen the old causeway and to purchase the interurban railway rights. Subsequently in 1935 a Commission Minute was passed to the effect that the Highway Department and Galveston County would submit an application to the Public Works Administration for a new causeway. In 1936 work was begun on the $2½ million causeway. It was designed by Terrell Bartlet Engineers of San Antonio and constructed by Austin Bridge Company. Supervising Engineer for the Texas Highway Department was J. T. Kelly.

Jim Douglas and W. J. VanLondon were District Engineers during construction. This bridge was dedicated August 15, 1939. Automobile traffic was immediately switched to the new causeway from the old railroad causeway, and until 1951, when the new causeway was damaged by a barge, the old causeway had no traffic except for railroad cars. The roadway of this new causeway was approximately 25 feet above the mean low tide and had a double bascule with a combined length of 138 feet. When any vessel larger than a small shrimper approached the bridge, vehicular traffic had to be halted, and the bascule leaf raised. The boat would pass through the bridge, and the leaf would slowly come down, and the traffic lights with warning gates were raised, and then traffic resumed its movement. This was irritating and a waste of time, and it was downright uncomfortable on a hot day to have to wait 20 minutes for one small pleasure craft that happened to come by. People had to leave their homes about 30 minutes early just to make sure they would have adequate time to get to work on time. However, the bridge served its purpose and did its job well.

With the advent of the Interstate Highway System in the late 1950's, U.S. 75 became Interstate 45. This meant that the causeway's capacity had to be increased to interstate standards. Plans

The sun sets on the first day of use of Galveston's twin causeway system. One-way traffic moves on three lanes on each span. Approximately 95,000 vehicles will be able to move on and off the island daily on the new causeway system. The overall width of each span is 46 feet, with a 40-foot roadway.

immediately were begun for a new causeway and a means of modifying the existing causeway. Although the causeway had been designed with sufficient foundation to support a double deck, it was decided that a separate causeway should be constructed, the existing causeway modified and the bascule system removed, and the roadway raised to a 73-foot clearance. Work began on the new causeway September 1, 1959. The work was done by Texas Gulf Construction Company under the supervision of the Texas Highway Department's Resident Engineer, Claude Riney. It was completed August 11, 1961, at a cost of $3,800,000.

The W. R. Aldrich Company of Baton Rouge, Louisiana, began modification of the old-new causeway in November 1961. Resident engineers were G. W. Callihan (deceased) and Hardy Jarrell. District Engineer during construction of both projects was W. E. Carmichael.

The modified causeway serves traffic outbound from the island. The casual observer will not observe anything unusual until he reaches the high point and starts down. Then to his astonishment he will discover that he is going down a steeper road than the one on the neighboring causeway. It is just as though Galveston was in a hurry to speed its visitors away.

Actually the grade down is five per cent compared to the 3.5 per cent grade coming up. This was a matter of economics for many thousands of dollars were saved by this design feature.

To refer to this latest highway facility as the new causeway is incorrect since a major portion of it is 25 years old, nor is it proper to say that it is the old causeway because the "old" causeway is still there, a few hundred feet away to the north. So for the lack of a better descriptive name it is referred to as the "old-new" causeway. Perhaps only a few people now living in Galveston can refute this designation by saying, "I remember riding on the wagon bridge, it is the old causeway." ■

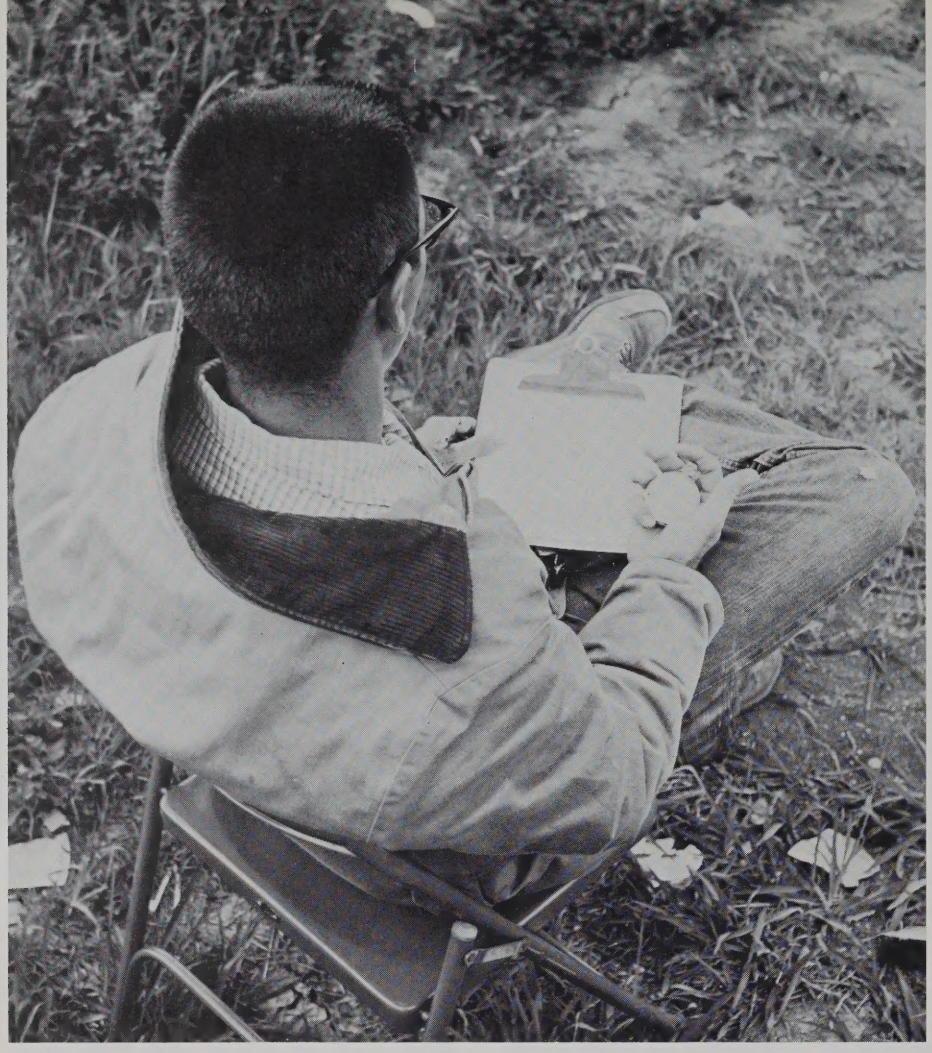


Photo courtesy of San Marcos Record

Stopwatch in hand, this Highway Department employe was busy checking speeds of automobiles on the Seguin highway (S.H. 123) in front of the high school just one day after the community requested the Department to check speed limits on the road.

BLUESTEIN
... prompt action.

THE FASTEST HIGHWAY ENGINEER?

J. M. Owens, Assistant District Engineer
Austin, District 14

DISTRICT ENGINEER Ed Bluestein may have set a new record recently for speedy cooperation of the Texas Highway Department with parents, school and city officials in San Marcos.

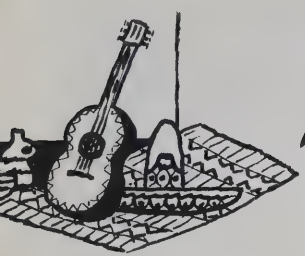
In what the San Marcos *Record* described as a "tense, crowded" meeting, Bluestein faced the group to discuss what should be done about safety on State Highway 123, the Seguin highway. The complaint was that a 50 m.p.h. speed limit was too high in front of James Bowie Elementary School and the senior high school.

The district engineer promised that a traffic survey would be made and overhead flashing lights installed near the two schools. Early the very next morning speed checkers were on the scene to begin their traffic survey.

Speed checks were made from I.H. 35 to just south of the high school entrance. He said traffic speeds were recorded with speed zone signs in place and with the signs removed. They also checked about twice as many vehicles as they normally would. At the speed station nearest I. H. 35 the difference in the 85 percentile with and without the signs was less than two miles per hour. Readings taken near the elementary school and the high school varied only slightly from this finding. Traffic on the section studied carries between two and three thousand vehicles daily.

As a result, Owens said speed zones were lowered from five to 10 miles per hour, an overhead flashing light was erected, and a proposal was submitted to the Traffic Section of Maintenance Operations Division for channelization at the intersection of S. H. 123 and F. M. 621. Bluestein also recommended that a six-foot high chain link fence be built along the school right of way to allow students to cross the highway at only two points.

Bluestein received several letters from grateful parents and the superintendent of schools for the "splendid cooperation and prompt action" taken to improve traffic conditions in and around the city's schools. ■



Bienvenidos a Corpus Christi

Russell A. Reeb, Engineering Assistant I
Corpus Christi, District 16

CORPUS CHRISTI enjoys an influx of good neighbor visitors from South of the Border because of its proximity and because the Mexican people observe Holy Week as National Holiday time. This section of Texas invites the visitors, and business people welcome them since the peso rings well in the till.

Because of the large number of Mexican nationals, the District 16 traffic engineering department realized it was an emergency situation and requested the sign shop to make signs in Spanish to erect with existing English language signs.

Early in the year, since Easter Sunday can come as early as March 22 (Easter is a movable festival calculated as the first Sunday after the first full moon after the vernal equinox, and cannot come later than April 25), chambers of commerce send *embajadores* of goodwill into the nearby Mexican states of Tamaulipas, Nuevo Leon and Coahuila, who personally spread the word and see that varieties of glowing travel folders find their way into receptive hands. Tourists crossing the border during Holy Week signify "Mission Accomplished."

Once in this area, visitors are hailed by window posters bearing *bienvenidos* . . . or welcome. Business places identitify their bilingual employes to assist the visitors. Many encounter oral and written language barriers since they don't speak English.

On four different occasions during the recent Easter season, one motel operator on Corpus Christi Beach stopped visitors from entering the off-ramp of U.S. 181 Corpus Christi Harbor Bridge. They had made this violation because they couldn't understand the existing sign installations.

We found that adding the Spanish signs at the two exits of the harbor bridge remedied a situation that could have been serious. The signs remained up until after the Easter holidays. ■

During the Easter holidays, Spanish signs were put up alongside English signs to help visiting Mexican tourists find their way about the Corpus Christi area without mishap.

Were You Born in a Covered Bridge ?*

Carol Nation
Travel & Information Division

This is the final article in *Texas Highways'* three-part series on covered bridges. Next month, a conclusion to the series will be featured, written by noted author and engineering historian Richard S. Allen of Round Rock, New York. Allen will trace the evolution of the covered bridge . . . where it first developed, the men who designed them and the bridgebuilding techniques they created, and how the covered bridges gave way to the newer methods and materials of engineering progress.

A COVERED BRIDGE still stands in Canada, posted with a two-ton load limit . . . which was plenty for the loads of hay it was designed to carry. But the school bus that now crosses it weighs two tons itself. So, twice a day the bus unloads its human cargo on the near side, proceeds alone to the far end, and waits for the school children to troop across by foot and reload. Luckily they are sheltered from rain and snow by the bridge's roof.

So it is that the covered bridge—symbol of 19th Century America—still plays a role in 20th Century America.

At least one still exists on a U.S.-numbered highway—U.S. 302 over the Saco River in New Hampshire.

The South Carolina Department of Highways has taken over maintenance and preservation responsibilities of South Carolina's three covered bridges.

In areas where steel shipments are costly and wood is plentiful, covered bridges are still built, notes engineering historian Richard S. Allen of New York. For example, in Lane County, Oregon, a few modern ones are planned and built by engineers every year . . . especially in newly developed areas where the need for heavier bridges has not yet been established. And in Allen's article, "Roofs over Rivers," in the June 1959 issue of *American Heritage*, he notes:

"Recently, residents of the Massachusetts towns of Charlemont and Sheffield petitioned the Commonwealth's Department of Public Works to replace their old bridges in kind. The contractors looked over the elaborate plans for modern three-lane covered bridges, and then realized that there were no timbers in all New England big enough to meet the specifications. So both Charlemont and Sheffield have shiny new covered bridges, built in 1951 and 1953, respectively, but the wood that went into their construction came all the way from Oregon!"

Allen also tells this story about how Charlemont townspeople appealed—in somewhat creaky verse—to the state's Department of Public Works to replace one of their covered bridges:

**An old Vermont sarcasm leveled when someone failed to close a door promptly.*

It is no wonder that many cartoons about covered bridges have been drawn, because for 150 years they bore a cross-section of American life . . . . the farmer, his family, his stock, commercial traffic, traveling peddlers, minstrels, circuses, preachers, vagabonds. For years during the 1800's it was fashionable to try one's hand at bridge designing, and many successful businessmen retired into the study of engineering with the goal of inventing a better bridge truss . . . for the man who could build a better bridge was the hero of his day. The covered bridges were used as drill halls or blockhouses for troops, for town gatherings, for political rallies . . . such as in the Hayes and Tilden presidential campaign, and for World War II bond rallies.

I'D NEVER TROT A HIGH STEPPIN' HORSE THROUGH THAT THING! I WOULDN'T TROT THROUGH IT MYSELF!
I'LL SUE TH' COUNTY! TH' BLANKETY-BLANK FOOLS AIN'T DONE A THING ON THIS BRIDGE SINCE BRADDOCK'S DEFEAT! I'LL—I'LL—WHOA, BOY, WHOA, NOW!
T. M. REG. U. S. PAT. OFF. COPR. 1945 BY NEA SERVICE, INC.
BORN THIRTY YEARS TOO SOON
5-15
J.R.WILLIAMS

Reprinted by permission of NEA Service

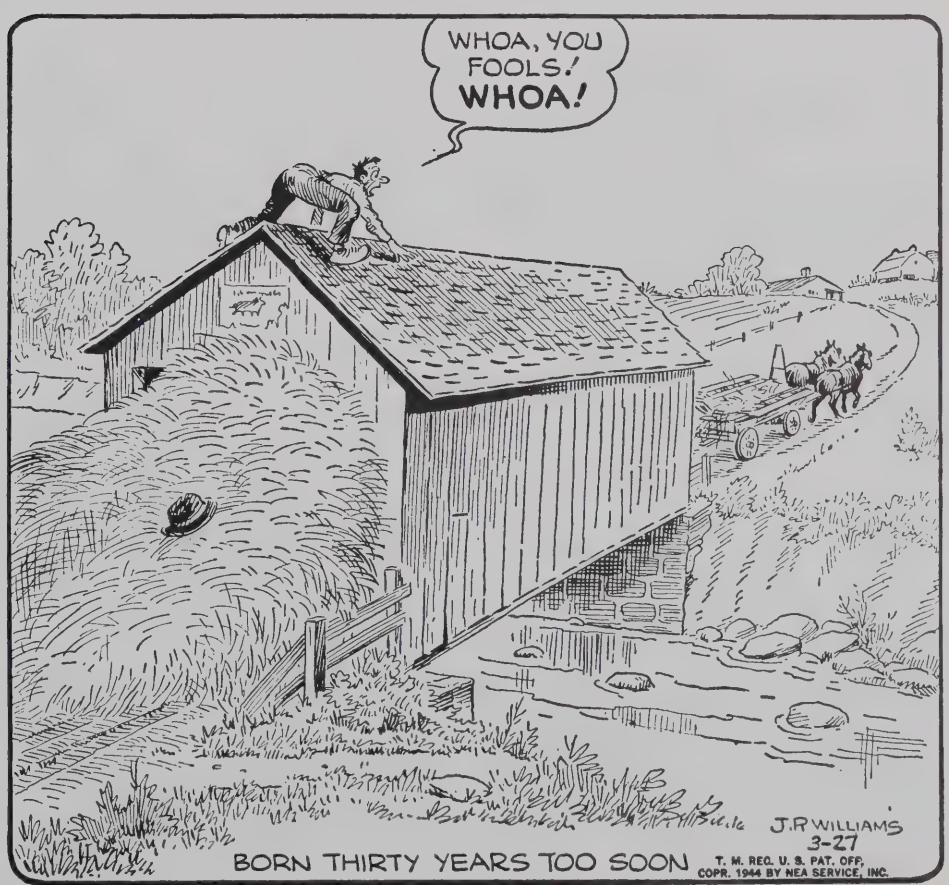
The Bissell Bridge is falling down,
Right in the middle of our town
Please do view the matter with alarm
And do vote "Yes" unto our plan.

The department replied—also in kind:

Struck by the setting's natural beauty
The Commissioner said 'twas the state's duty
To save that lovely rustic view
And save the state some money, too.
For it seems the wood bridge can compete
And still be cheaper than concrete . . . .

One of the newest covered bridges on record is in New York. Dedicated February 14, 1959, and christened the Kissing Bridge, it spans the west branch of Cooper River at Barclay Farms community on Route 70. The oldest covered bridge known to be still standing is Hays Bridge across Conodoquinet Creek near Carlisle, Pennsylvania. It was built in 1825.

As yet, no covered bridge has been found still standing in Texas, although the state once had several. Two bridges definitely existed at Gonzales and at McKinney . . . and since the first article of this series in the May *Texas Highways*, a third bridge has been verified. Jess J. Whatley of Austin wrote State Highway Engineer D. C. Greer about



a bridge he remembers:

"When I was a farm boy living in the vicinity of Harleton (1907) and Ore City, Texas, we used to go on fishing trips on Big Cypress Creek. We would usually camp somewhere near a covered bridge which was across Mims Crossing, which was near Mims Chapel in Marion County. One night I remember we slept on the floor of the bridge so we would be out of a rain. This covered bridge was probably removed during the building of the Lake of the Pines."

Martin S. Nelson, Engineering Aide IV at Wichita Falls, wrote that he had talked about the old bridges with J. M. Isbell, who was District Engineer at Wichita Falls from 1938 until his retirement in 1950. Isbell said he had heard there once was a covered bridge across Beaver Creek about three miles west of Rocky Point. This was an old route that went from Iowa Park to a settlement in the area.

This seems to coincide with the covered bridge we heard about earlier that is rumored to still stand in Wichita County near Iowa Park. ■

AMERICAN COVERED BRIDGES

Alabama	45	Missouri	7
Alaska	2	New Hampshire	57
California	17	New York	31
Connecticut	5	North Carolina	3
Delaware	4	Ohio	234
Georgia	44	Oregon	106
Illinois	11	Pennsylvania	347
Indiana	152	South Carolina	3
Iowa	12	Tennessee	9
Kentucky	31	Vermont	121
Louisiana	1	Virginia	8
Maine	11	Washington	11
Maryland	8	West Virginia	40
Massachusetts	15	Wisconsin	1
Michigan	6	U.S. Grand Total:	1,342

Canada 456

Compiled by Philip and Betsy Clough for "World Guide to Covered Bridges," published by the National Society for the Preservation of Covered Bridges, Reading, Mass., from "Bridges and Men," by Joseph Gies, 1963.

Pioneer Highway Engineers Die

Two of the state's pioneers in developing and modernizing the Texas highway system died this spring.

A. C. Gentry Sr., 71, District Engineer at Tyler for 18 years, died May 12 at Tyler. Thomas J. Kelly, 70, who supervised the construction of the Texas Highway Department's first Galveston Causeway 1936-38, died May 6 at Bryan.

Gentry joined the Highway Department in 1919, just two years after the Department's establishment. He was District Engineer at Tyler from 1940 until 1958, when he retired. At the retirement banquet given for Gentry at Tyler, State Highway Engineer D. C. Greer and Highway Commissioner Charles Hawn were speakers.

Gentry is credited with being the first engineer to take a highway traffic count in Texas, with being among those to work on the first paved road in Smith County, and with doing pioneering work in the design of concrete ships for the government in World War I. In 1955 he was named Outstanding Engineer of the Year by the East Texas Chapter of the Texas Society of Professional Engineers. He was an architectural engineering graduate of The University of Texas.

Thomas J. Kelly joined the Highway Department in 1928. In 1930 he became Engineer of Design of the Highway Design Division in Austin, and in 1935 he became Chief Engineer of Construction and Design. In 1936 he was transferred to Galveston where he supervised the Galveston Causeway construction until its completion in 1938.

Kelly returned to Austin in 1939 as Senior Resident Engineer with the Bridge Division. In 1954, he retired to become associated with the Highway Research Center at Texas A&M University. He was a civil engineering graduate of Texas A&M.

A&M Chancellor Emeritus Gibb Gilchrist, who was State Highway Engineer for 11 years, termed Kelly's contributions to the design of Texas highways "greater than those of any other one man . . ." ■

New F M Program Brings Total Texas Miles to 65,778

A sweeping program to build more than 1,000 miles of Farm and Ranch to Market Roads in 166 Texas counties was announced in May by the Texas Highway Commission.

The Commission placed an estimated cost of $23 million on the total package of 227 projects financed for construction by the action. Construction on a total of 1,032 miles of Farm to Market Roads is involved.

The Farm to Market Program is an annual roadbuilding undertaking of the Texas Highway Department under legislation authorizing a yearly budget for new FM construction.

The Farm to Market Road grid in Texas now stands at 37,143 miles of designated roads. "Designated" includes both roads already built and those financed to be built in the near future.

With addition of new miles authorized by the Highway Commission today, the Texas highway network exceeds 65,000 miles for the first time. New total for highways of all types in Texas: 65,778.

Of this designated mileage, 3,031 miles represent Interstate Highways and 25,604 miles are U. S. and State-numbered highways of the primary system. The remaining mileage is Farm to Market Roads.

Of the new farm roads to be added to the Texas highway system under the 1964 program announced in May, 69 per cent are school bus routes and 67 per cent are mail routes. The remaining per cent are generally new routes that when improved also will be utilized as school bus and mail routes.

Today's sprawling Farm to Market Road system in Texas traces its genesis to a six-mile stretch built in 1936 between the communities of Mount Enterprise and Shiloh in Rusk County. From this first Farm to Market Road the Texas Highway Department has been pointing toward an ultimate system of 50,000 miles of such roads. Biggest expansion of the system has occurred since 1949.

"The 1964 Farm to Market Road Program is a good illustration of the Texas Highway Commission's 'balanced program' philosophy," said Commission Chairman Herbert C. Petry Jr. "Within this concept of highway development, the Commission views all highways as lifelines and strives to integrate the various highway systems for the overall good of the state." ■

AWARDS

40 Years

District 23
Virgil E. Terry, Skilled Laborer

35 Years

District 1
Shirley G. Fry, Supervising Resident Engineer

District 2
Charles M. Morgan, Senior Resident Engineer

District 6
Charles W. Batchelor, Right of Way Agent IV

District 7
Earl Key, Skilled Laborer

District 10
Royce A. Ginn, Engineering Aide IV
Roy S. Mann, Warehouse Superintendent

District 12
Benjamin W. Cooper, Supervising Resident Engineer
John D. Ashburn, Designing Engineer

District 18
Spence B. Taylor, Skilled Laborer

District 19
Thurman Glover, Semi-Skilled Laborer
Temple B. Ingram, Senior Resident Engineer

District 23
Joe T. Tinney, Skilled Laborer

30 Years

D-14
John W. Mugge, Senior Designing Engineer

District 2
Charles N. Keith, Inspector II

District 12
Arlin L. Barron, Skilled Laborer

District 18
Thomas A. Smith, Supervising Resident Engineer

District 19
Jesse L. Ross, Shop Foreman IV

District 23
William T. Moore, Assistant Fiscal Officer

25 Years

D-10
Nolen E. Williamson, Office Engineer

D-12
Sam B. Stewart, Chief Investigator

District 10
Joel E. Shaw, Senior Resident Engineer
Buster E. Davis, Semi-Skilled Laborer

District 12
James E. West, Senior Resident Engineer
Benedict J. Strauss, Accountant II

District 18
Fred D. Holt Jr., Supervising Designing Engineer
Charlie L. Rominger, Skilled Laborer

District 19
Luther C. Craig, Semi-Skilled Laborer

District 22
Orgel B. Bramblett, Skilled Laborer

A seven-camera television surveillance system in t

TELEVISIO

SMILE the next time you drive through the Baytown-LaPorte Tunnel—you will be on camera—television camera, that is.

The Texas Highway Department has just completed the installation of a closed circuit television system in the tunnel which constantly monitors the flow of traffic in and through the 0.8-mile tunnel.

This "Space Age" technique in traffic control is another first for the Department and is the first of its kind in the South.

An electronic eye high atop a sign pole relays a picture of vehicles approaching the Baytown-LaPorte Tunnel to a central control room.

Baytown-LaPorte Tunnel allows one operator to observe traffic conditions at a glance.

N ERA IN TRAFFIC CONTROL

Fred Edwards, Traffic Engineer
Houston, District 12

The idea of a television surveillance system to monitor traffic in the tunnel was first discussed among highway engineers several years ago. However, it was not until April 8, 1964, that it became a reality.

Seven cameras are used in providing complete surveillance of the entire length of the tunnel. One camera is focused on each approach to the tunnel and five cameras are located within the tunnel. The cameras are mounted on poles placed on the walkway adjacent to the traffic lanes.

Peering down on traffic from the seven elevated vantage points, the electronic eyes feed pictures to a central control room located on the Baytown side of the tunnel. By watching the information fed into the seven monitors, the operator has instantaneous pictures of traffic conditions in the tunnel at all times. The operator spots auto accidents and breakdowns in the tunnel and dispatches emergency vehicles immediately to aid in unsnarling traffic bottlenecks.

The control operator also has at his finger tips, controls which regulate traffic signals inside the tunnel, thus enabling him to expedite rescue efforts in the tunnel by stopping all traffic approaching the tunnel and by clearing the tunnel of other traffic.

The surveillance system is being operated 24 hours a day.

Prior to installation of the television cameras, eight men were required to man the two guard stations inside the tunnel and to monitor flow of traffic during the 24-hour period. Guard duty inside the tunnel, despite efforts to make it otherwise, was less than desirable due

L. E. Wright, Control Tower Operator, prepares to push button which operates one of the traffic lights in the tunnel. A new television surveillance system makes it possible for one operator to watch and to control traffic with a push-button system.

Traffic leaving the tunnel is picked up on this TV camera mounted on a steel pole along the walkway.

to the constant noise, cold weather, and the ever present exhaust fumes. Today one operator sits at the console desk high inside the control room building, away from the noise and fumes, and monitors the entire traffic operation.

The Highway Department originally took bids to purchase the surveillance system, but we found the system could be leased at an appreciable savings. We should realize a monthly savings of $2,500 with the new system. In addition to this, the surveillance system has made it possible to place the men formerly used as tunnel guards in jobs better matching their capabilities.

The TV setup is the forerunner of a much larger project which will utilize television monitoring for traffic control. Even before this tunnel surveillance project was placed in operation, plans were on the drawing board for a 6.4-mile closed circuit system on the Gulf Freeway. The new project will include more than 20 cameras and should be completed early in 1965.

Television is proving to be yet another tool useful in helping the Highway Department and the tax-paying motorist to realize more efficient use of existing highways. ■

He Forgot to Look Up

From **Better Roads:** Not another car was in sight. The nearest Michigan State police vehicle was miles away. So the motorist stopped his car, opened a door and threw out a pile of rubbish.

But a few minutes later he was greeted by a state trooper, who pulled him over and wrote out a ticket, charging him with littering the highway. The trash disposal had been spotted from the air by a state-police pilot during a routine air patrol of Interstate 75 between St. Ignace and Sault Ste. Marie. The pilot radioed a description of the car to the patrolman, who was waiting up the road for the motorist.

No Couches Needed

A report prepared by the Institute for Motivational Research concludes that litterbugs are highly vulnerable to an attack consisting of public education, provision of adequate litter-disposal facilities and enforcement of strong laws against the act of littering.

Dr. Ernest Dichter, president of the institute, reports that one of the most important findings of the study is that "no marked social, economic or psychological features characterize the litterbug. Maladjustment and malfunctioning of individuals do not appear in the picture. Littering is largely the result of thoughtlessness and recent socio-economic changes, rather than malicious intent."

"It is comforting to know that the ever-present litterbug is not in need of psychiatric treatment," comments **Better Roads** editorially. "And most highway departments that wage continual war on litterbugs are in agreement with the institute's conclusions. The only drawback is the enforcement of anti-littering laws. The elusive litterbug seldom litters in full view of police officers, or others who might identify him, and only occasionally does he leave enough evidence behind him to lead to his arrest."

The Berlin Bridge

A 1.1-mile structure has been built in Duisburg, Western Germany. It is the Berlin Bridge which carries traffic over an area of factories, railroads and waterways.

Composed of six "bridges" each about 980 feet long, the project is part of a vast engineering project resulting from the sinking of the city's ground which rests on coal mines, reports **Etudes Routieres.**

Both ends of the bridge rest on reasonably solid ground. The six sections in between rest on piers that sink continually. On top of each pier are hydraulic jacks capable of raising the bridge as much as 30 inches. Massive roller bearings backed up by other jacks stand ready to compensate for horizontal motion. Fulltime crews patrol the bridge day and night, and when measurements show that the structure needs adjustment, oil is pumped into the appropriate hydraulic cylinders to raise a section or shove it sideways. The waviness probably will continue until 1970 when the coal miners burrowing under Duisburg will have finished lowering the city.

Under the Channel

The British and French governments simultaneously have approved the proposal that a railroad tunnel be built linking the two countries via the English channel, reports **World Highways.**

The historic decision comes 162 years after the original idea for a channel link —a carriageway in a bored tunnel was presented to Napoleon by a French engineer.

No starting date has been announced, but the tunnel will be formed by either laying preconstructed sections of tube into a trench in the channel bed, or by boring into rock beneath the bed. Either type would cost about $400 million and take about six years to build.

The tunnel would be 32 miles long, with 23 under the sea. One of the plans proposed is that in addition to passenger and freight trains, the tunnel also would provide frequent ferry trains for automobiles. Cars would be driven on and off the special trains, which would consist of enclosed, flat-decked rail cars. Each train would carry 150 to 300 cars. The trip would take about 45 minutes. Today the fastest channel ferryboat service takes 90 minutes.

Highways and Courts

The Colorado Supreme Court, in an opinion written by Justice Edward C. Day, has held that the court cannot substitute its judgment for that of the state highway department in locating a highway. The original district court suit sought to prevent the construction of a freeway in Denver.

Truck Registrations Up

Truck registrations in the U.S. have increased 39 per cent in the past 10 years, with Southwestern states experiencing the greatest rate of growth. Total truck registrations at the end of 1962 amounted to 12,840,615. California leads all states with 1,258,416 and Texas is second with 992,114.

Essays on Driving

Teenage drivers who break traffic laws in Columbia, Mississippi, are required to write a 500 to 1,000-word theme on reckless driving and read it to the mayor and police officers. During the past five years, only one teenager has written his second essay.

The Tie Bar Machine

D. W. Syphrett, Supervising Resident Engineer
Anahuac, District 20

THE OLD IDEA of a slip form paver gulping up masses of aggregate, cement and water to lay a ribbon of concrete pavement has something new added.

Included with these materials is now a mat of reinforcing steel that slides through the jaws of the paver like spaghetti down the throat of a native Italian. No trouble, no bother and apparently with all the relish of a good spaghetti eater.

Our fears that the slip form paver would have the same lack of affinity toward the reinforcing steel mat as we have had for that grand old Italian dish proved false as it moved ponderously down the road gulping up the steel with a gusto that would do credit to the best of the spaghetti eaters.

Because of the rate of progress of the slip form paver, the contractor had to fabricate either a special machine to speed up tieing of the reinforcing steel mat or slow down the progress of the paver. The tieing machine devised by the contractor, although simple in construction and in operation, brings assembly line methods to the paving market. It moves down the roadway at a constant rate, forcing the many steel tiers to tie the transverse reinforcing bars at a uniform rate of speed.

The tie bar machine is a simple motorized platform with two transverse rows of spacer shieves underneath the platform, powered by a gasoline motor. It travels on four pneumatic tires. Under the bottom of the rear row of shieves is a trough to hold a supply of transverse reinforcing steel bars. A simple steering mechanism, with the longest tie rod you have ever seen, serves to guide the machine down the road.

And oh yes! Just in case the steel tiers become so proficient in their work they start loafing on the job, the machine operator can shift gears and take off at a higher rate of speed. They have progressed from extra work order gear to the contractor's gear and are striving to get to the profit sharing gear. No luck so far.

Fabricating the reinforcing steel mat with the machine is fairly simply. To start the operation, longitudinal steel bars are threaded through the two rows of transverse spacer shieves. Then tieing the longitudinal steel bars continues in the conventional manner for several thousand feet in front of the machine. Then with the supply trough of the machine filled with transverse bars, the machine starts down the road and at the proper space the leadman blows a whistle, whereupon preselected steel tiers reach into the supply trough and bring a bar of transverse steel in place for tieing.

Then the rat race is on, very reminiscent of cotton picking days, heads down, bottoms up and arms flying, except I've never heard a farm boss toot, toot, tooting down the cotton rows as the leadman does in this operation as he whistles, at the proper interval, for another bar of transverse steel to be put into place for tieing.

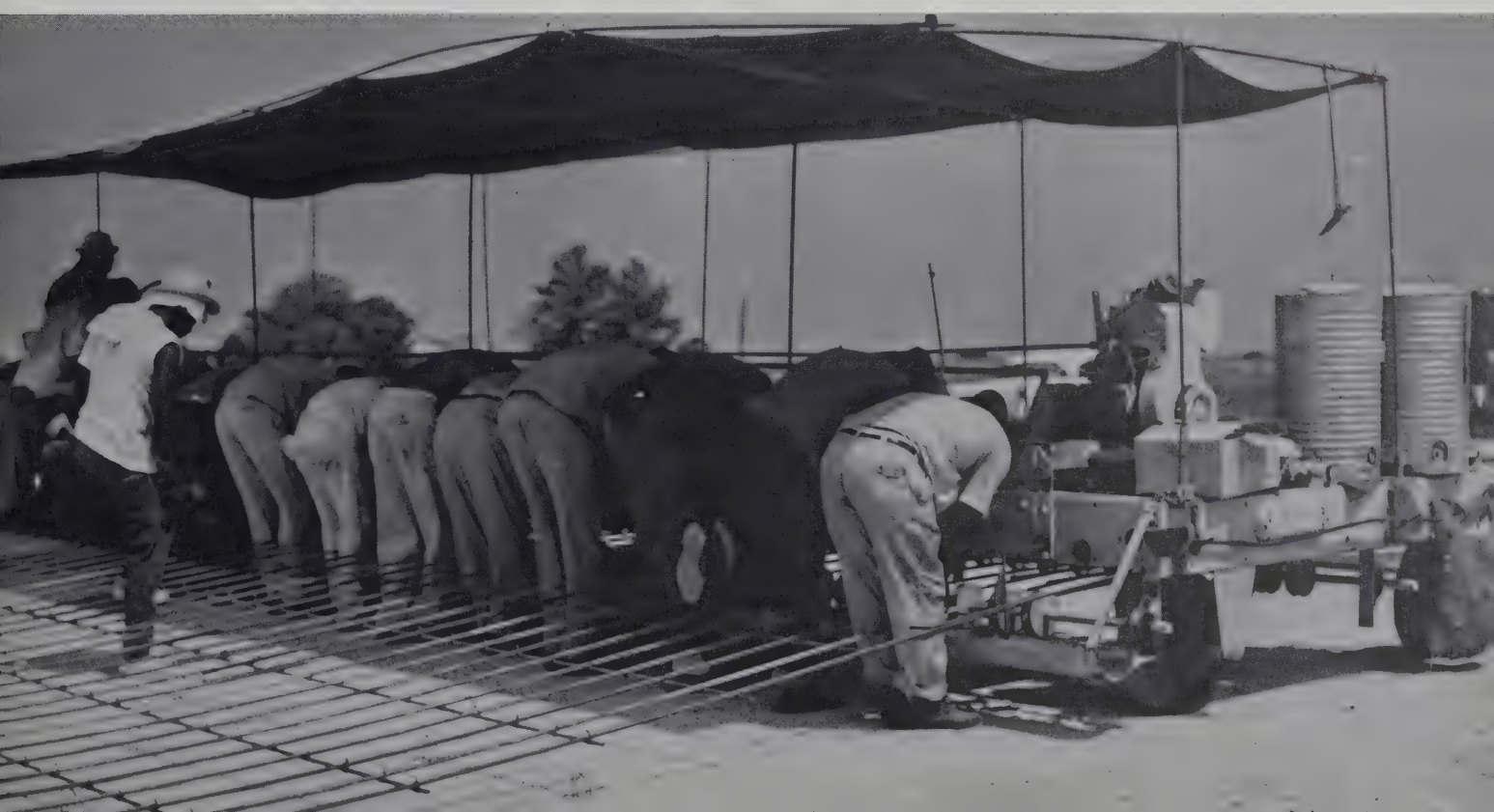
The machine is more than adequate for this job as the steel tieing operations, which include placing and tieing longitudinal steel and other allied work, takes only about three-fourths the working time that the slip form paver takes to cover the same ground, even though the tieing machine must be stopped every 15 or 20 minutes to replenish the supply of transverse reinforcing bars in the supply trough.

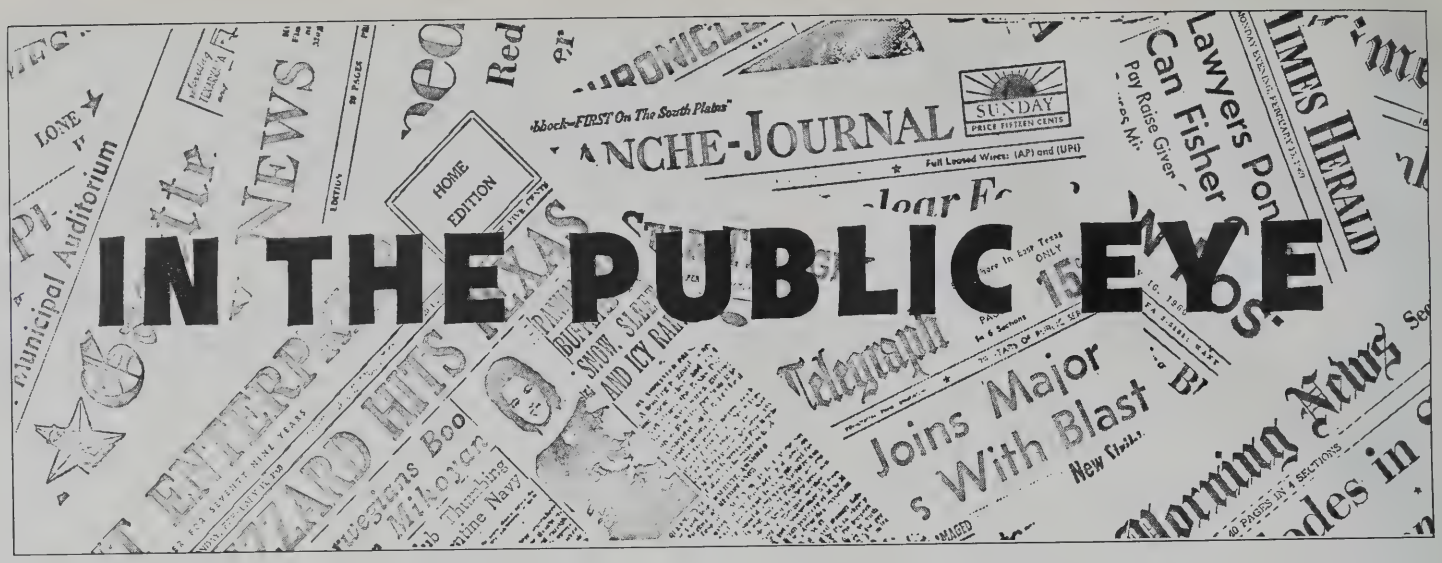
Contractor for this project on I.H. 10, which is in Jefferson and Chambers counties in District 20, is Austin Road Company and Austin Paving Company. W. E. Simmons is District Engineer at Beaumont. Project Engineer is R. M. Stephenson, Senior Resident Engineer at Anahuac. ■

This front view of the steel tieing machine shows the first row of spacer shieves and how the longitudinal steel bars are laced through the shieves.

The rear view . . . or should it be the rears view, shows the position of the steel tiers, the supply trough just under the second row of spacer shieves and the placing of the reinforcing steel bar chairs.

Pictures courtesy of Portland Cement Association





Parks and Roads

The Houston Post, on parks and roads — "Relaxation and recreation are keynotes in Texas State Parks.

"Accessibility is an important factor in drawing vacationing and touring travelers to parks. Some 62,000 miles of Interstate, U. S. and state highways link nearly all Texas State Parks.

"Farm to market and park roads connect parks not on main thoroughfares.

"It is possible to drive from sea level at Goose Island State Park on the Gulf Coast to mile-high Davis Mountains State Park in Western Texas, and then down into the precipitous depths of Palo Duro Canyon in the Panhandle, a distance of more than 1,000 miles on paved highways."

Of Nuts and Numbers

Fort Worth Star-Telegram, editorially — "The Texas Highway Department is to be commended on the sense of propriety it has shown in eliminating the vowels from the letters to be used on next year's car license plates. The so-called English system, which allows for more combinations, has been adopted for the 1965 tags. But the Highway Department considered it wise to sacrifice the additional combinations that would have been provided by use of the vowels.

"The English system employs three letters and three numbers instead of the present two-letter-four-number combination. With the vowels left in, some of the combinations would have formed undesirable three letters and three numbers, for instance, who would want to drive around for a whole year with the letters NUT on his license?"

Let's Get With It

Marshall News, admonishing its readers to "get with it" — "With so many worthwhile highway and street improvement projects looming in Marshall, Harrison County and this immediate East Texas area, it is time for a stop, look and listen session.

"In recent months, projects on top of projects have been proposed, and studies called for. It is necessary to realize they all cannot be started and completed simultaneously, because of lack of funds and other reasons.

"The way we see it — Farm to Market Road 31 is the most important project to the Marshall merchant and Harrison County at present . . . . By the summer of 1965, Interstate 20 will be at our back door . . . . It probably will not be long before the State Highway Commission calls for the final paving contract on Highway 31 . . . . .

"Second in line of priority is the East End Blvd. project, with the intersection of Highways 59 and 80 to the extension of Highway 59 off East End Blvd. to Interstate 20. According to state highway officials, the state 'is ready to go' on this project as soon as the city of Marshall is able to participate. The third priority project is U.S. 59 from Marshall through Panola and Shelby Counties into Nacogdoches County. Getting quite frank, this project could well be the 'life blood' to the Marshall merchant and Harrison County.

"Local agencies and merchants should definitely 'get with' these three projects — F.M. 31, East End Blvd., and U.S. 59. It may be getting later than you think."

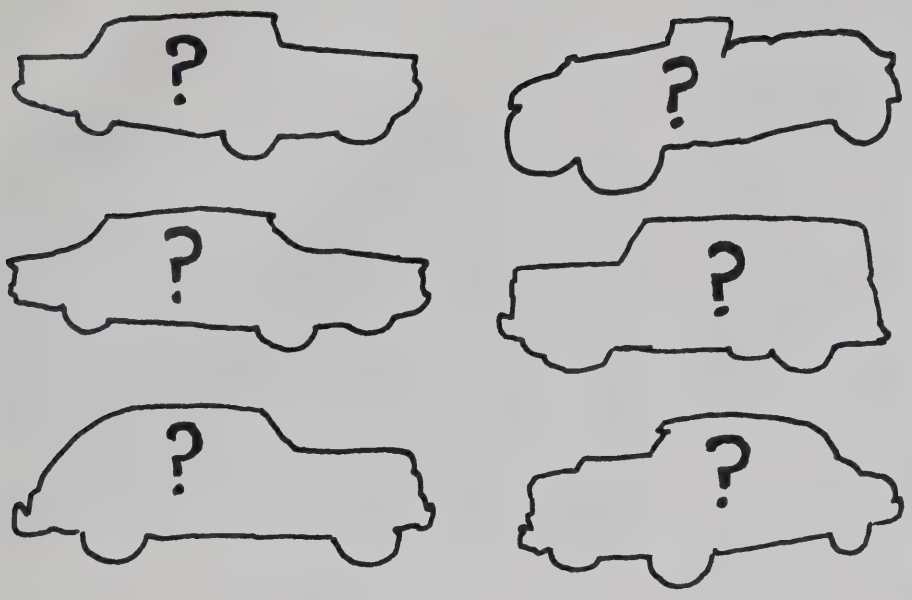
Causeway Comments

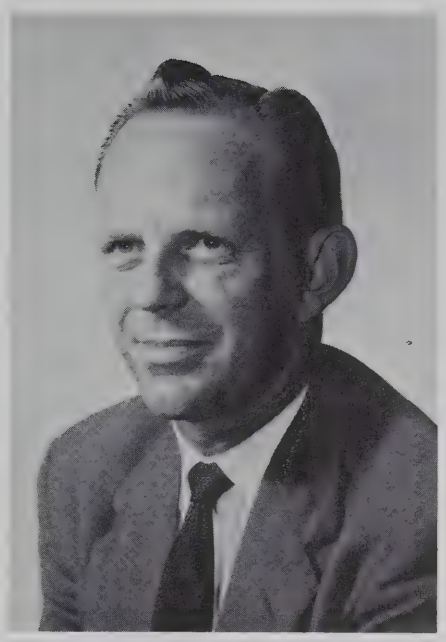
Galveston Tribune, after the dedication — "With proper fanfare Galveston today added another step to its brighter future with the dedication of its newly remodeled twin causeway.

"Galveston County has waited a long time for this artery. It doubles the city's causeway facilities and eliminates the source of a former traffic bottleneck created when a lift section was raised to let Intercoastal Canal traffic pass in Bay waters under the causeway.

"The full benefits of the twin spans will be many, adding another page to Galveston's potential, enhancing the city's image, adding to the comfort of traveling to our city for recreation seekers, vacationers.

"The Texas Highway Department has been a good friend of Galveston. We are glad to have had Herbert Petry, Texas Highway Commission Chairman, who formally opened the span with remarks, and others of the department in attendance."





R. W. TOWNSLEY
"They seem to vanish . . . ."

The Mystery of the Missing Vehicles

Marjie Mugno
Travel and Information Division

THE "Mystery of the Missing Vehicles" has been baffling Texas Highway Department and police officials for a long time.

Each year approximately 17,000 automobiles are stolen in Texas, reveals R. W. Townsley, Director of Motor Vehicle Division. That's an average of 45 cars per day. In fact, one automobile is stolen about every 31 minutes—an all-time record.

Most are recovered eventually, but a relatively large number—about nine per cent—never are found. They seem to vanish, like the vapor trail of a high-flying jet.

Townsley, who has been with the Department since 1941, is a member of the Texas Police Association's Major Crimes Committee. The committee is holding seminars around the state to enlist the aid of small-town officials in watching for these and other stolen vehicles.

Police statistics show that an automobile is involved in more than 90 per cent of major crimes committed in Texas, and it is through license plate identification that many a car has been traced and criminal apprehended. Hence Townsley's place on the committee.

None of the missing vehicles—in toto or in recognizable part—ever have turned up in Texas or in any surrounding states. It's as if they never had existed.

Usually, stolen vehicles turn up somewhere. Mexico, for instance. But our neighbors South of the Border haven't uncovered even one of the missing cars.

Searching junk yards has proved fruitless, too.

The wrecking yards are checked anyway by Department personnel. It's just policy. Current plates on wrecked automobiles are picked up by THD field men and destroyed on the spot, says Townsley, to prevent reuse on stolen or unregistered automobiles. Titles are also picked up and returned to D-12 in Austin for cancellation.

Until 1961, scrapped cars—complete with plates and negotiable ownership papers—could be purchased for $50. To prevent both plates and papers from falling into the hands of auto theft rings, the Texas Legislature passed a law in 1961 requiring each salvage yard operator in Texas to remove immediately the current plates from any vehicle purchased as salvage. The plates and titles then are kept under lock and key until claimed by the Highway Department.

"We pick up an average of 10,000 titles and 3,000 current license plates per month," said Townsley.

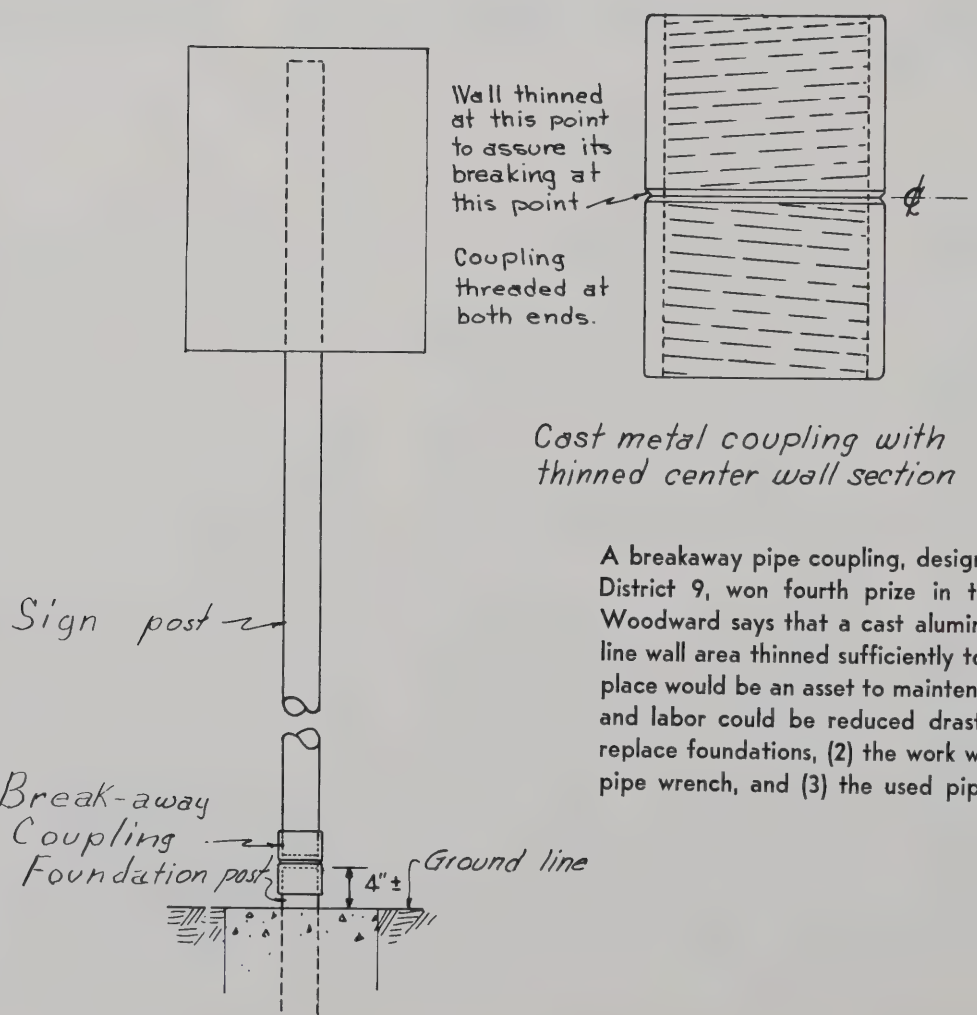
Meanwhile, officials of the Texas Highway Department and the police seek a clue to the missing vehicles. ■

TPEA Merit Awards

Ideas submitted by three Highway Department employes paid off in cash rewards in this year's Texas Public Employees Association Merit Award Contest.

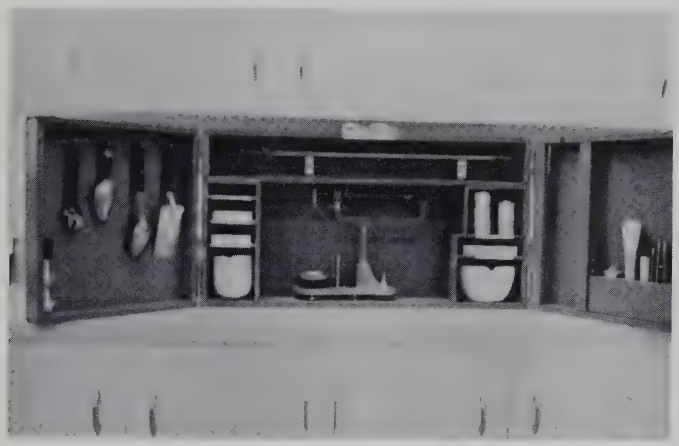
Joe G. Hanover, Assistant District Engineer, District 17, won second prize of $35 for his entry about roadside park signs. Gerald F. Weiler, Engineering Aide III, District 19, won third prize of $25 for a field lab P. I. equipment case. Eugene G. Woodward, Engineering Aide III, District 9, placed fourth for his entry of a breakaway pipe coupling. The award was for $10.

In keeping with the annual award program, Governor John Connally sent a letter to each state agency, saying in part: "These contests provide an opportunity for all State employees to participate in the movement to better our State government, the improvement of which is our continued interest and business."

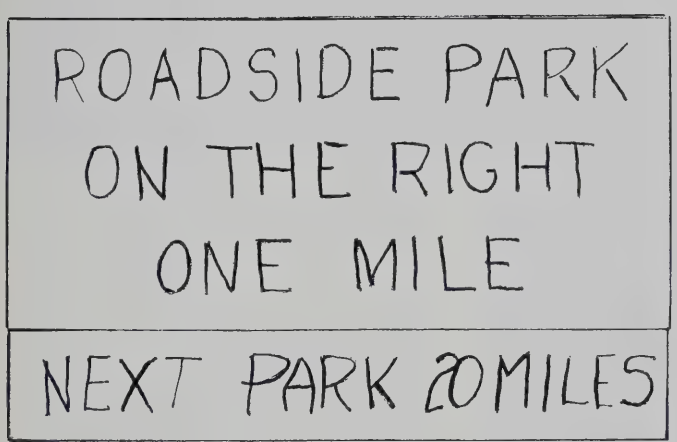


Cast metal coupling with thinned center wall section

A breakaway pipe coupling, designed by Eugene Woodward, Waco, District 9, won fourth prize in this year's Merit Award Contest. Woodward says that a cast aluminum coupling made with its center line wall area thinned sufficiently to assure its breaking at the thinned place would be an asset to maintenance because (1) the time, material and labor could be reduced drastically by eliminating the need to replace foundations, (2) the work would be simple, requiring only one pipe wrench, and (3) the used pipe would probably be used again.



This field lab P. I. equipment case won Gerald Weiler, Texarkana, District 19, a third prize of $25. Weiler designed the portable lab and says it has everything but an oven. The lab is 34½ inches wide, 18¼ inches high, and 9 inches deep when it is closed. It opens out to 69 inches.



Joe G. Hanover, Bryan, District 17, suggested an addition to roadside park signs and won second prize in the 1964 TPEA Merit Award Contest. He said, "I think it would be a good idea to add the words NEXT PARK 20 MILES, or what ever the distance to the next one. In this way the motorist can anticipate his traveling distance better. This addition could be put on the bottom of the existing sign without having to make a new one."

What was it like in the "good old days" before the Texas Highway Department was created? Austin *Statesman* columnist J. Henry Martindale wrote a picturesque description in one of his columns. Incidentally, he dedicated the column to Ed Bluestein, District Engineer at Austin. Here are Martindale's recollections:

... sort of a holiday affair

"Fifty years ago and long before that—that is, back in the horse and buggy days, and before the State Highway Department's advent, and also before the county commissioners had funds for the building and maintenance of roads—the farmers worked their own roads.

"The commissioners court named a road overseer in each community, and for some unknown reason this non-paying job was often sought from the court in the manner that people today hound their congressman for a post-master appointment. Perhaps it was due to the fact that being a road overseer was a person of distinction, and its holder was often 'looked up to' by the folks in the community. Each adult male from 18 to 60, who lived on the farm, had to contribute five days each year to work free on the roads in the area. Townfolks had to render the same service on the city streets.

"I was too young to be called out for work. However, I attended many of the workings because it was sort of a holiday affair for the farmers to be relieved of their farm work. Usually the overseer would wait until the crops were laid by in July before he called the men out for work.

"The workers would arrive soon after the first flush of dawn, bringing their lunches, hammers, hoes, iron crow bars, plows, grubbing hoes, and other tools. None apparently worked hard enough to hurt themselves.

"Frequently at the noon hour there would be boxing, wrestling and running matches by men and horses. One day two cousins put on a dandy fist fight.

"Some of the 'mainest roads' or those nearest town were 'kept up' in another manner. Convicts or people who had been convicted of a misdemeanor, and were unable to pay their fines, had to work it out on the roads. Justices of the peace and county judges in those days could assess a penalty of working so many days on the county roads. Their overseer would usually be a paid one who would strut around wearing a big pistol, and perhaps carrying a long rifle, to see the men kept busy.

"Fifty years ago Texas farmers were self reliant and did not depend on the state and county to maintain their roads. Neither did they have engineers that had been off to school. I might add, however, that the roads were 'simply awful.'" ■

Unique Job on the San Pedro Bridge

G. P. Brown, Supervising Resident Engineer
Del Rio, District 22

PROPOSED CONSTRUCTION of the huge Amistad Dam required relocation of U. S. Highway 90 west and U. S. Highway 277 north of Del Rio.

Construction of a new bridge on U. S. 277 across San Pedro Creek has been completed, and the bridge on U. S. 90 over the Devils River is nearing completion.

The bridge over San Pedro Creek is 2,000 feet long and incorporates 28 70-foot prestressed concrete beam spans with a maximum height of 90 feet. The bridge and approaches cost a little more than one million dollars. Ross C. Watkins, Inc., of Laredo was contractor on the job.

Two unique features not usually seen in bridge construction were employed on the project. One was custom made steel forms for the piers and the other was a rolling scaffold attached to the prestressed concrete beams.

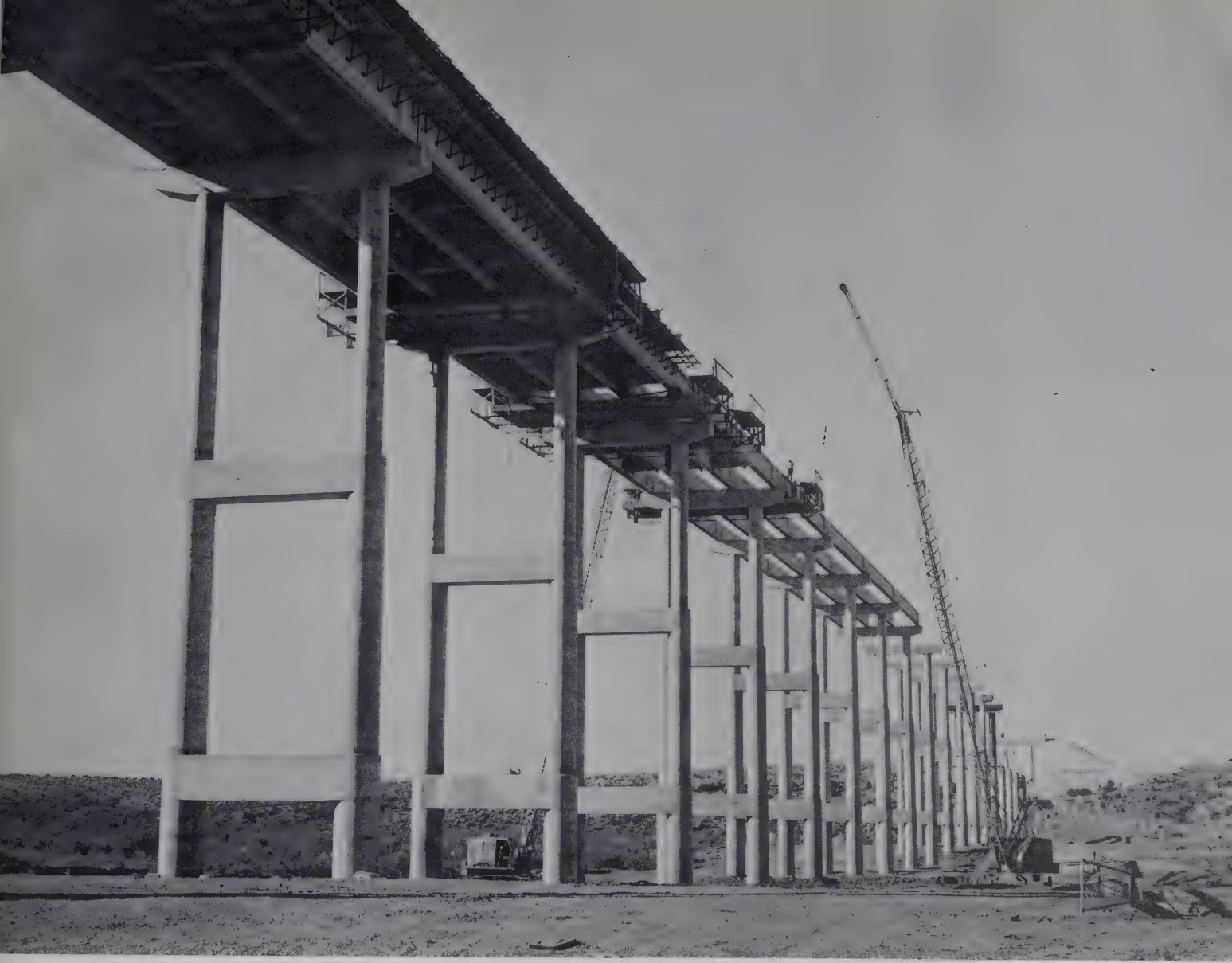
The piers are resting on bedrock with 54-inch drilled shafts varying in depth from 22 feet to 68 feet. The first 54-inch columns were formed and poured separately. The columns had special friction collars which supported the 54-inch tie beam steel form. This custom built tie beam steel form had a 48-inch riser form which supported the next column. Only four bolts needed to be removed to take down the tie beam.

The next 30 feet of the pier were two 48-inch columns with 48-inch tiebeam. The columns and tiebeams were poured monolithically. This section of the pier took about 35 cubic yards of concrete. It took about three hours to strip the forms. The forms also provided for a 36-inch riser for the next column.

All the steel forms were assembled on the ground, reinforcing steel added, and then the complete unit hoisted into place with a dragline. The forms were anchored by steel cable with turnbuckles to secure accurate alignment. The forms were designed by the Dixie Form Company.

The other unique feature of the San Pedro Bridge project was the rolling scaffold suspended from the prestressed

Steel forms, with reinforcing steel set in place on the ground, are hoisted in place on the San Pedro Creek Bridge.



The San Pedro Creek Bridge near Del Rio looked like this in mid-February. The new bridge, recently completed as part of the Amistad Dam Reservoir Project, was built with two unique features in bridge construction—custom steel forms for the piers and a rolling scaffold.

concrete beams. Rollers clamped to the outside beam rode on the beveled flange of the concrete beam and was removed easily with a small block and tackle attached to the caps of the adjoining piers.

To move the scaffold to another span, the contractor left a hole in the slab to accomodate the dragline cable. The hole was later plugged. The scaffold was lowered to the ground and then hoisted up for the next span and clamped to the beams. The scaffold, designed with safety in mind, was 14 feet wide, had solid decking so workmen couldn't see the ground beneath them. It served to form and pour diaphragms, to form the slab and to wreck forms to transport to the next section. Four scaffolds were used on the project.

The bridge had a premature opening. Two men in a car went around one barricade about 2 a.m., traveled about a mile and went through two more barricades. They then got on plywood lying on the beams, traveled about 80 feet, and when the plywood gave out they fell between the beams to the ground about 60 feet below. The car was a total wreck. One man had a broken arm and lacerations.

They commandeered a six-cubic-yard Transit Mix truck and drove 10 miles to the hospital in Del Rio.

How they got out through all the locked gates is still a mystery. ■

To and From Our Readers

The Red Carpet Look

Motorists traveling in the Van Horn area on I.H. 10 and U.S. 80 often ask, "Why is the Texas Highway Department building red highways?"

This is why there is a dull red hue on the shoulders of the Interstate route and for several miles of pavement on old U.S. 80 west of Van Horn:

Surface material in the area comes from an outcropping of meta-rhyolite, a rock of the same chemical composition as granite but with finer grain content than granite. This rock was formed in the Pre-Cambrian age about one billion years ago.

Max Moore, Urban Construction Engineer in District 24 at El Paso, says rhyolite has been specified for shoulders on Interstate construction so motorists can distinguish more easily between the main lanes of traffic and the paved shoulders.

Another Texas hospitality for out-of-state visitors—the red carpet treatment.

Change in District 20

Jack Norwood has joined the staff of the District 20 headquarters shop in Beaumont as Maintenance Construction Superintendent. The position is a new one created in a reorganization of the district's maintenance operations.

Norwood had been Maintenance Construction Foreman at Woodville for 11 years. Last year he won a national award from the Men's Garden Clubs of America for outstanding work in highway landscaping in the Woodville area.

James W. McGown, formerly assistant to the maintenance foreman at Anahuac, is Norwood's successor at Woodville.

What Shall I Do?

At least as far as litter is concerned, the Texas Highway Department seems to be taking on a Dear Abby role. Archie J. Sherrod, District Engineer at Odessa, sent in this letter a little Midland girl wrote to him:

"I saw the film, 'Money to Burn.' I realized that I myself was a litterbug at times. Now we keep a litter bag in our car, but when it gets full, my daddy throws it out the window. I am suggesting that you put more places on the highway to dump litter bags. Please write and tell me what you think."

Scenic System Studied

A comprehensive study of the need of a national system of scenic roads and parkways, including full development of the scenic and recreation potential of existing national and state road programs will be conducted by the Bureau of Public Roads.

A Cool Map

Drew Deberry, Special Services Officer at Austin, received this "cool" letter from his young niece, Donna Lucas:

"Dear Uncle Drew, How are you? Why I am writing so late is because we didn't have time to show the maps.

Every Time?

Clinton H. Oehler, Draftsman I at San Antonio in District 15, sent in this cartoon. Oehler notes that the perfect caption for the cartoon would be "They'll do it every time!"

TEXAS HIGHWAY COMMISSION

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Texas Highways

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I went up to the teacher to ask to show the pretty maps. Miss Anderson said we didn't have time. I went the next day to show the lovely maps. We didn't have time and etc. and etc. Finally I got to show the maps. Everyone liked them. I did too. Thank you ever so much for the maps. They are really swell and cool, man."

Now that's a novel way to describe the new 1964 Travel Map . . . cool, isn't it . . .

A Street's Ups and Downs

W. E. Carmichael, District Engineer at Houston, received a poem the other day from an anonymous writer. Amused at what he thought was the originality of the unknown poet, Carmichael sent the poem to *Texas Highways*. But by a coincidence that same day while flipping through some old 1924 copies of the *Texas Highways Bulletin*, we came across the very same poem . . . only the title was changed. The original version was written by an Ed Staples and called "Our Street." The poem sent to Carmichael was called "It Happens Everywhere."

They took a little gravel,
And they took a little tar,
With various ingredients imported from afar.
They hammered it and rolled it,
And when they went away they said they had a pavement to last for many a day.
They came with picks and smote it,
To lay a water main,
And they called the workmen to put it back again.
To lay a railway cable they took it up once more,
And they put it back again just where it was before.
They took it up for conduits, to run the telephone,
And then they put it back again as hard as any stone.
They tore it up for wires, to feed the 'lectric light,
And then they put it back again, which was no more than right.
Oh, the pavement's full of furrows,
There are patches everywhere,
You'd like to ride upon it,
But it's seldom that you dare.
It's a very handsome pavement,
A credit to the town,
They're always digging some of it up or putting it down.

Texas and Cigars

This joke came from the news sheet put out by the Val Verde County Maintenance Section at Del Rio:

Jesse Beckett (Maintenance Construction Foreman) tells us about the other day when he was going up to Cap Fellows' job near Pandale . . . and this car pulled up by the side of him and motioned him to stop. Beckett stopped and got out of his car and walked up to the other car to see what he could do. Well, there was a great big fat man smoking a big black cigar driving this little Volkswagen, and he said to Jesse, "Say, officer, how do you get to Pandale?" Jesse told him, "Just keep going up this road and then follow a dirt road and it will take you right to Pandale." "Well, how far is it?" the fat man wanted to know, still puffing away on his cigar. "Oh, about 33 more miles from here," says Jesse.

"Heavenly days," yelled the fat man. "At home in Rhode Island I can drive clear across the state on one cigar, and here in Texas I've already smoked a whole box and I'm not even to Pandale."

Deer Casualties

District 22 sent in a report compiled from records kept at Del Rio on the number of deer killed on the highways in Val Verde County. The total number killed during 1963 was 345.

This number represents only the deer that Department employes removed from the rights of way; untold numbers of deer are injured and struggle off to pastures to die.

"We have deer crossing signs to warn the motorists, but deer frequently cross most anywhere to either feed or go to water," the report notes. "It is practically impossible to keep them out of our rights of way. The only thing to do is to drive with more caution, especially at night. Texas has deer over most of the state, so they are on nearly all of our state and county roads."

LBJ Ranch Trip

Would you like to see the LBJ Ranch?

Just call the Fredericksburg Chamber of Commerce. A new feature of the chamber's historical Fredericksburg tour is a drive into the LBJ Ranch. The tour is sponsored by the Gillespie County Historical Society.

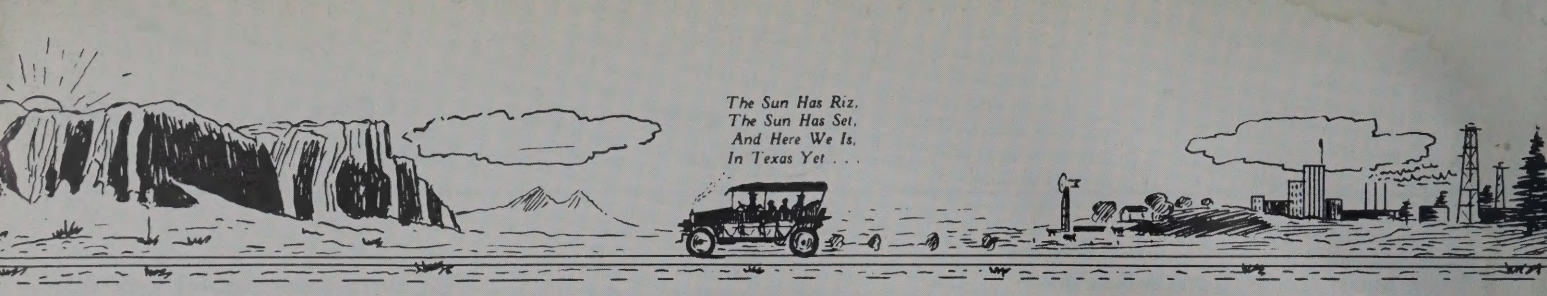
The tours are given on Saturday and Sunday at 2 p.m. by chartered bus. A view of the ranch is permitted only via this tour.

In Respect

W. W. Potter, District Engineer at Tyler, recently clipped out a letter-to-the-editor which appeared in the Tyler Morning Telegraph. It compliments Texas Highway Department personnel in an unusually thoughtful way. This is the letter:

"I was recently in Tyler on the occasion of my father's death, and was impressed by the reverent manner in which we were treated in the funeral procession. Men took off their hats, and as we passed the Texas Highway Department on West Front, a man was taking down the Flag and he stopped in the process and held the flag while the procession drove by."

It was signed by Mrs. Kenneth H. Morrison of Lewisville.



OVER THE HIGHWAYS

Comments . . . from the Traveling Public

• May I explain and request all at once?

As Secretary of a Highway, I wanted as usual the latest and best and striking of what we call road maps but which have considerable detail for our public and for distribution but primarily for our offices and personal use.

Being "resting" here at the Home for the Aged at Trinity, Colorado, I wanted one of those large and certainly striking more or less for saturation of the best and sort of "institute" organ.

A fine packet came to me. There was the grand map, well indented with detail, places, things like the Gulf Coast, and small brochure and little detailed data.

There is a Texan here and a smart guy wants to use the map for best purposes and he literally took it from me!

Where does that let me down as say a student and in the highway business? Well, just to ask for another packet and it will be locked up in the night when not in use in instruction—to me, as well as others.

As a brother pro how does that strike you?

Ralph H. Faxon
Emeritus Secretary
Navajo Trail Association Inc.
Walsenburg, Colorado

• The first week of this year we added over 1,400 miles to our odometer reading as we made use of the materials you provided us and saw South Texas.

My husband's Air Force career has provided us with residence in Massachusetts, California (twice), Arkansas, and Texas (thrice). With our original homes in Illinois and Ohio and relatives in Florida you can see that we've criss-crossed this country several times.

To find even farm roads well-paved and wide was truly heartening. Even the most recent maps available did not do justice to the extent of your progress on super highways, always a pleasant surprise. Keep up the good work!

Mrs. William G. Potts
Fort Worth, Texas

• I'm sure you'll be surprised to receive a letter from a Dutch boy, but I'll tell you why.

A few months ago I was in Air Defense School at Fort Bliss, El Paso. Many of my friends got in the Service Club very interesting descriptive literature about Texas.

I guess you already know what I want. Yes, you are right. I want to ask you if you'll be so kind to send me some different books about the wonderful state of Texas. The special one I mean is about seven by nine inches and has 30 pages. Thank you very much, and if you need to know something about my country, so ask me. Many greetings from,

Henk Cruys
Utrecht, Netherlands

• We make this trip every year and have come to depend on the Orange Tourist Bureau to give us the latest road information and the best route to travel. We enjoy traveling on the good Texas highways.

Lake Charles, Louisiana

• I would like some information about your state. If you could I would like a rattlesnake rattler.

Steven Rudlek
Brainerd, Minnesota

• We encountered the smallest percentage of bad roads in Texas than any of the 16 states we visited on our vacation.

Lloyd Moore
Pensacola, Florida

• I am in the fifth grade and we are studying the western interior. I don't think you are in it, but may we have some information on Texas?

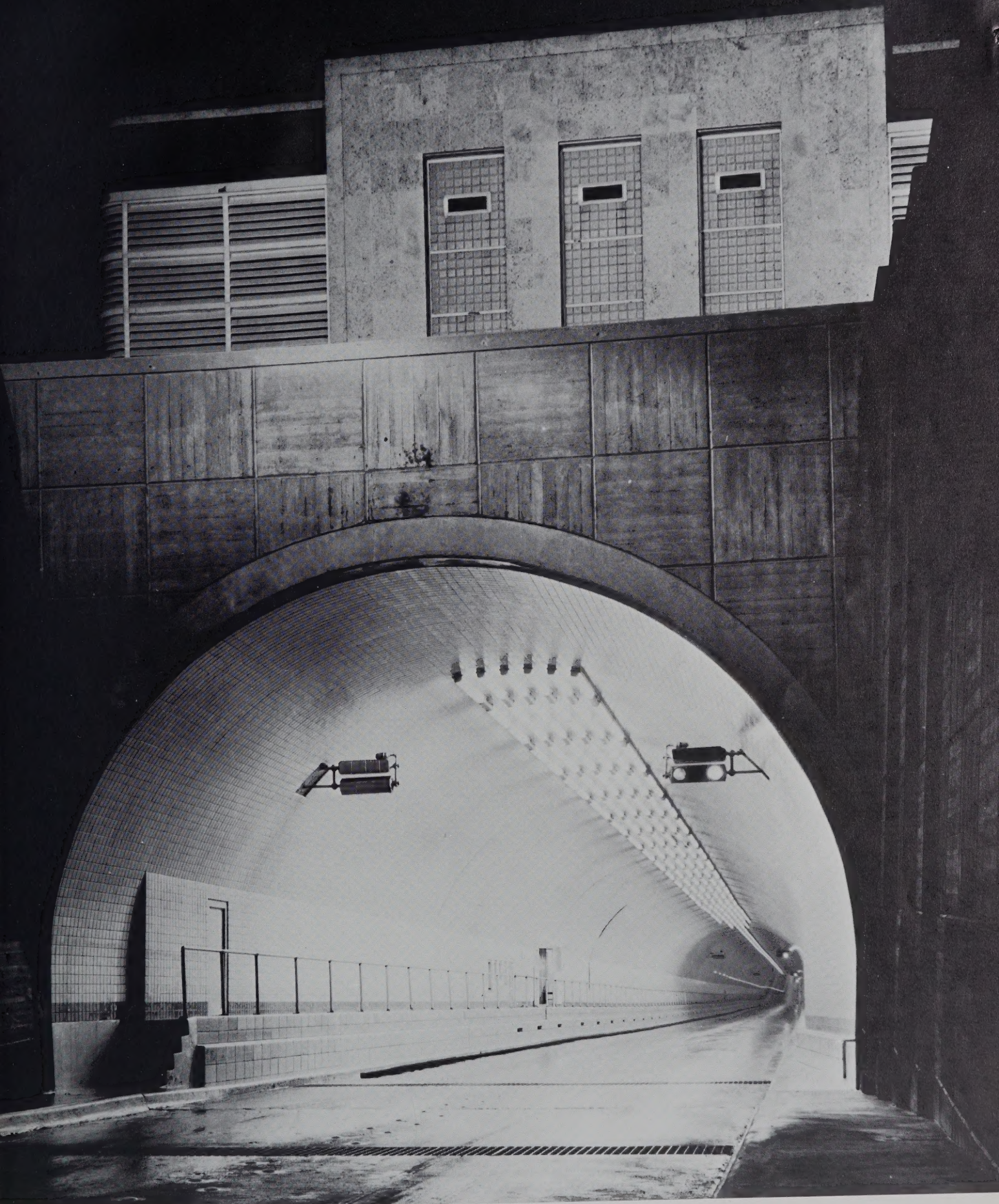
Jay Lanahan
Grand Forks A.F.B.

• Texas overall is rated to us as one of the most beautiful states we have ever traveled in or through. The highways are the cleanest and best we have ever traveled on, and are the best marked ones. Your tourist information is wonderful.

Lake Charles, Louisiana

• I'm writing for some information for our social studies class. We would like to know the penalty of cattle wrestling.

Brenda Towery
Havana, Illinois



Excellently maintained, clean and well lighted, District 12's Baytown-LaPorte Tunnel has drawn many compliments from the traveling public since it was opened in 1953. Now the tunnel has a new added safety measure . . . a television surveillance system which enables traffic conditions within the tunnel to be monitored constantly. A feature inside this issue tells about the TV system.

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"What did I do?" is the logical title for this spontaneous shot that won first prize in this year's feature-picture section of Pictures of the Year competition. The picture was taken by Tom O'Reilly of the *Toledo Blade*. Because it is so apropos for a highway magazine, *Editor & Publisher* lent the picture to *Texas Highways*.